

Fish Screens at Sherman and Twitchell Island

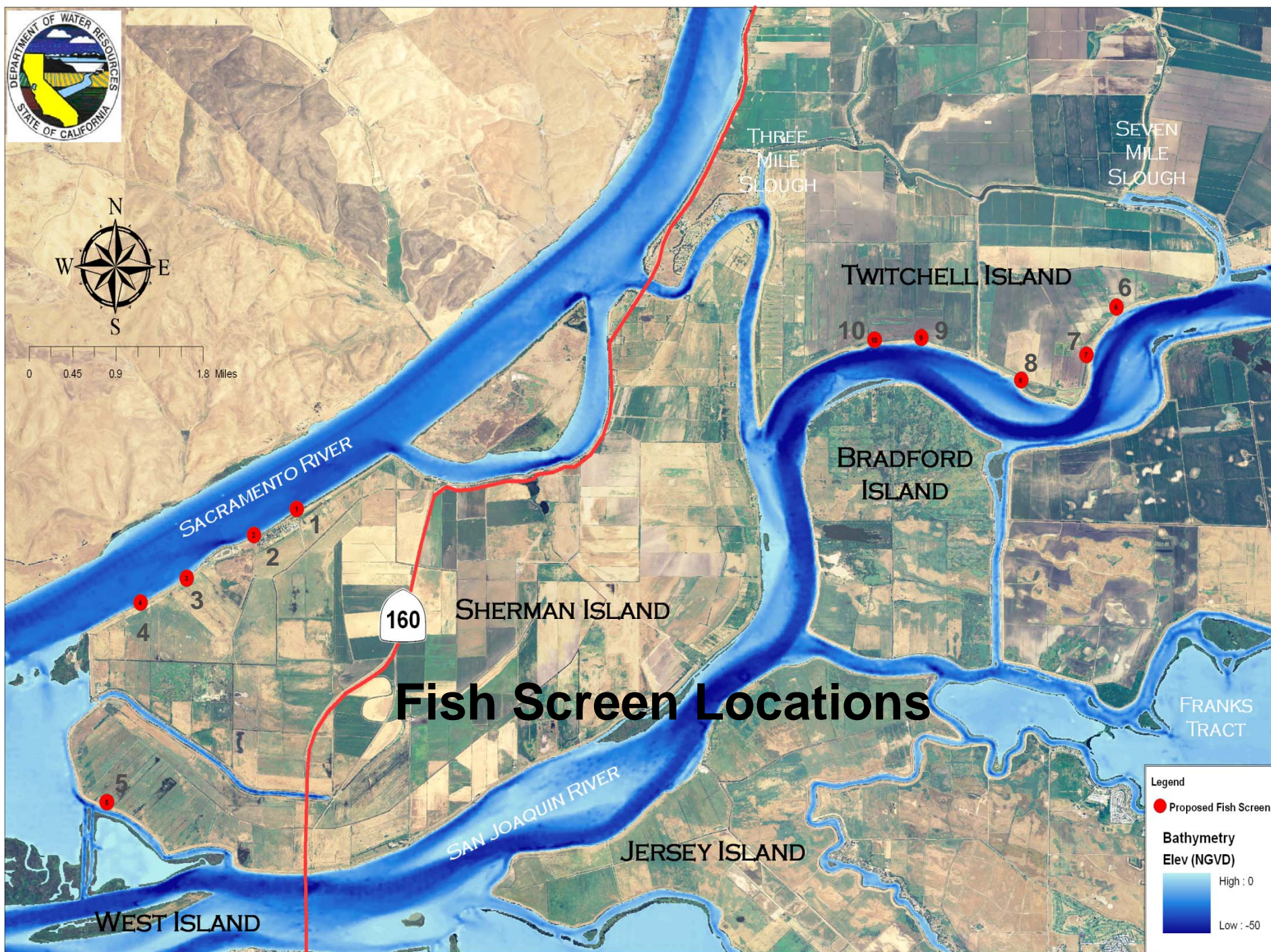
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Department of Water Resources
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Project Goals

- Protect the Delta Smelt and help restore the Delta habitat
- Improve operational flexibility for the State Water Project and Central Valley Project by protecting Delta fish resources
- Serve as a role model by promoting the installation of state-of-the-art fish screen systems for diversions in the Delta region



0 0.45 0.9 1.8 Miles



Legend

● Proposed Fish Screen

Bathymetry
Elev (NGVD)

High : 0
Low : -50

Sherman Island

Sites 1-5

Existing Conditions

- 12" to 18" Steel Pipe Siphon
- Open area



Environmental Issues

- Mason's Lilaeopsis
- Giant Garter Snake

Twitchell Island

Sites 6-10

Existing Conditions

- 14" to 24" Steel Pipe Siphon
- Open area

Environmental Issues

- Giant Garter Snake





Mason's *Lilaeopsis*



Giant Garter Snake

Fish Screen

Product Information

Evolution of Fish Screens In the Delta

1950's to Present

Screens generally provide protection for the weakest and smallest fish

Current Criteria

1.75 mm

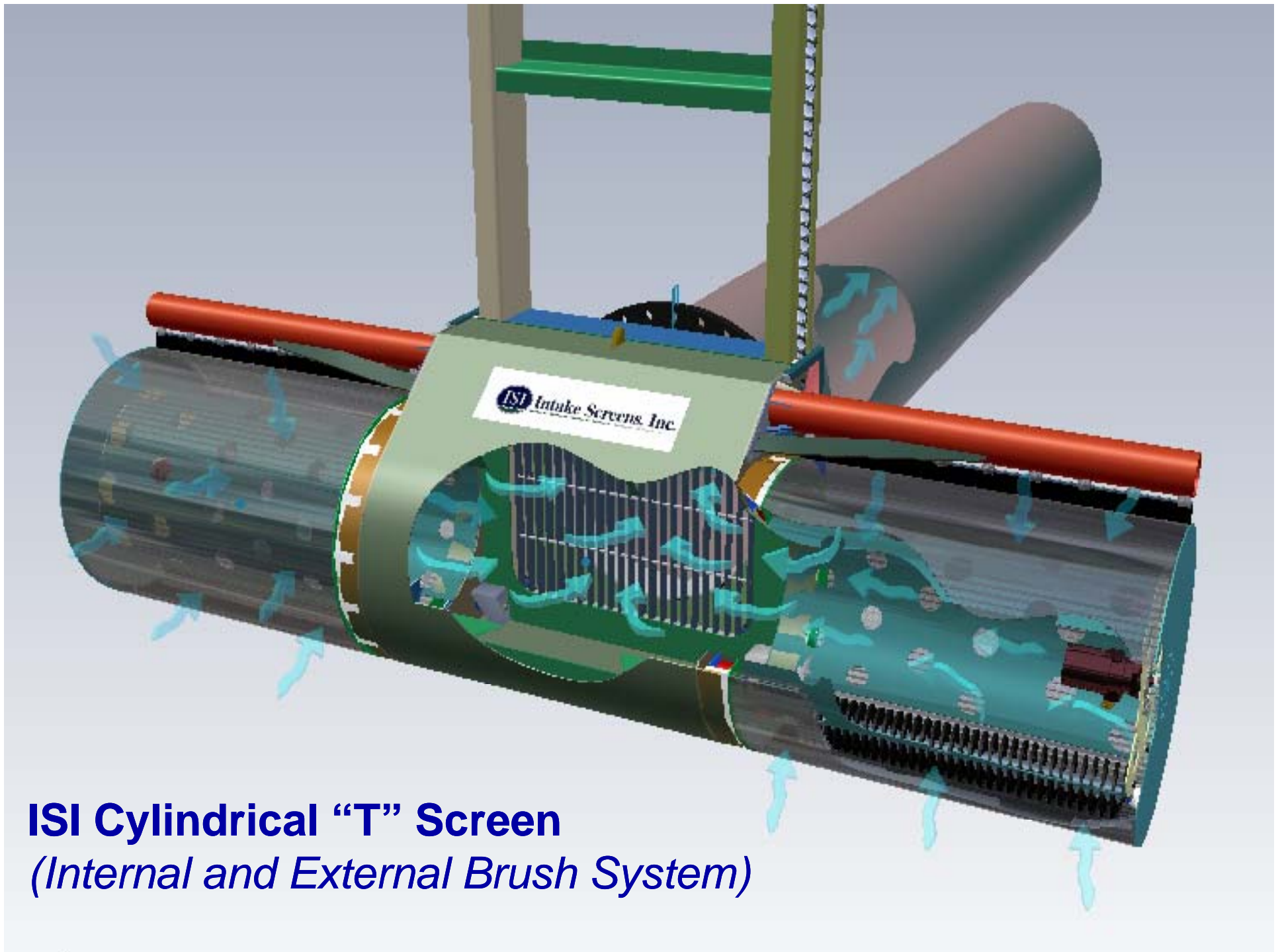
Existing CVP Tracy and SWP Skinner Fish Facilities

26 mm



Design Criteria

The fish screens project includes the installation of pile supported, self-cleaning, retrievable, cylindrical screens sized to prevent entrainment of Delta smelt. Screens will be installed on existing diversions along the NW shore of Sherman and south shore of Twitchell Islands

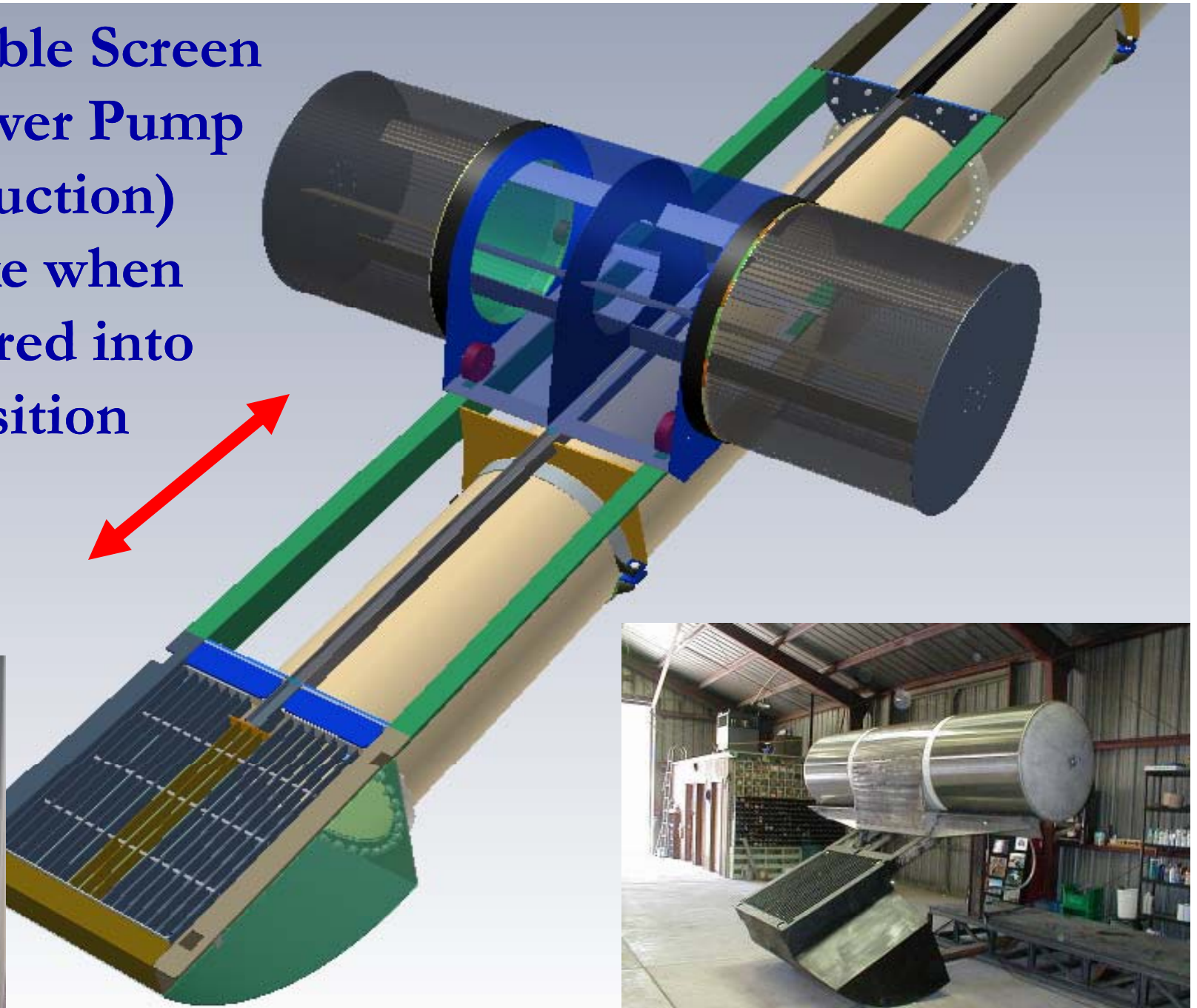


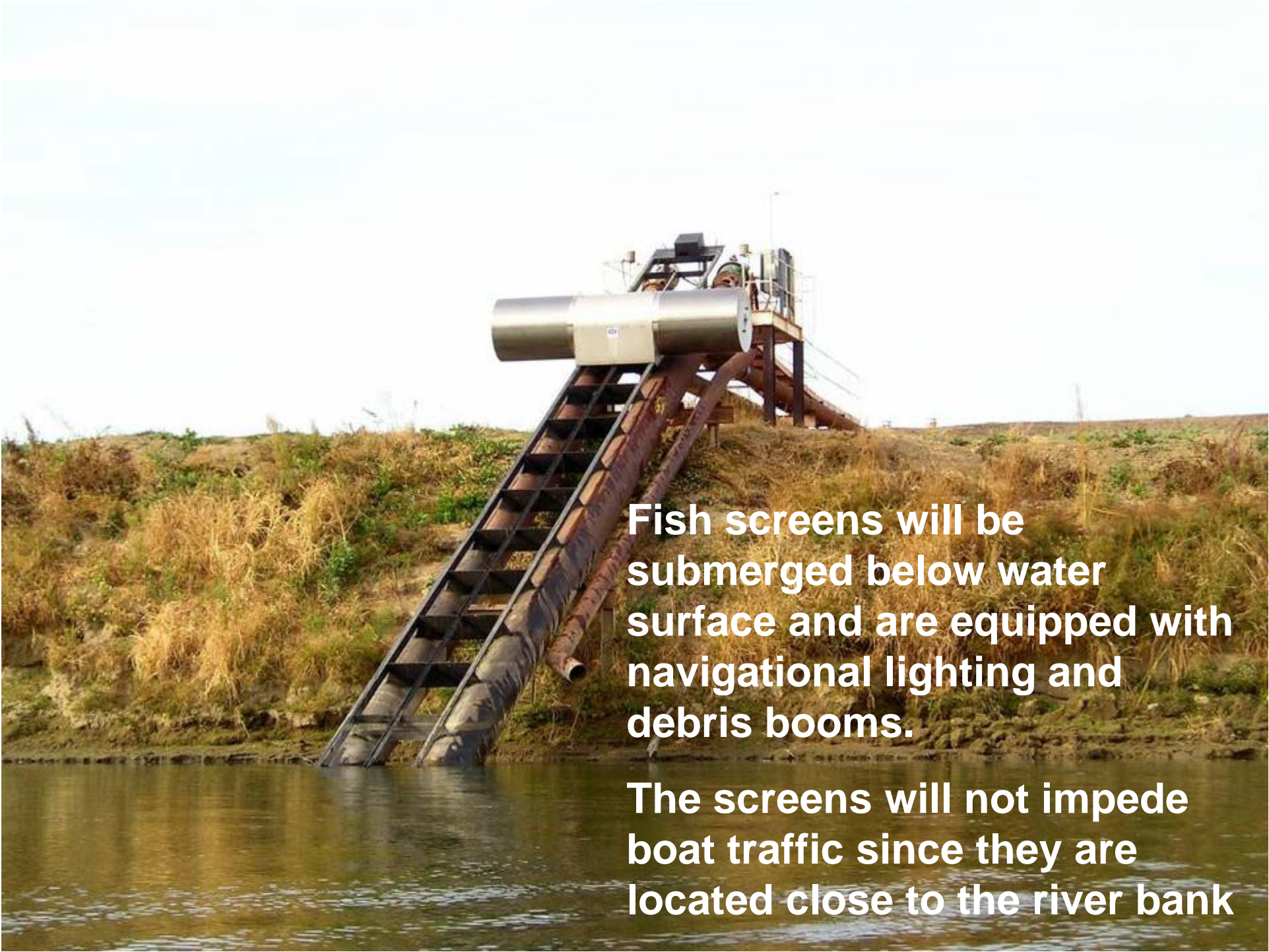
ISI Cylindrical "T" Screen
(Internal and External Brush System)

Design Criteria (cont.)

Each Screen can be pulled out of water using track system for ease of maintenance and prevention of attachment by invasive Quagga and Zebra mussels. Prevention of the spread of invasive mussel species was included in the actions directed by the Governor

Retrievable Screen
Seals Over Pump
(or Suction)
Intake when
Lowered into
Position





Fish screens will be submerged below water surface and are equipped with navigational lighting and debris booms.

The screens will not impede boat traffic since they are located close to the river bank



Status

DWR is in the process of preparing final contract documentation and obtaining proper environmental documentation and permits.

Cost Estimate

Capitol Cost	\$ 6,713,000
Engineering Cost	\$ 1,190,000
Construction Management	\$ 271,000
Environmental/Permits	\$ 201,000
Total	\$ 8,375,000

Schedule and Milestones

- Spring 2011 – Acquire environmental permits and advertise construction contract
- Fall 2011 – Begin Construction
- Fall 2012 – Complete Construction

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